CLAIMS

What is claimed is:

1. A method comprising:

connecting a removably coupled memory device to a downhole device while the downhole device is at the surface;

lowering the downhole device, along with the removably coupled memory device, into a bore hole;

operating the downhole device thereby creating data;

storing the data to the removably coupled memory device;

raising the downhole device and the removably coupled memory device to the surface; and

disconnecting the removably coupled memory device from the downhole device.

2. The method as defined in claim 1 further comprising:

coupling the removably coupled memory device to a surface computer; and

reading the data from the memory device by the surface computer.

3. The method as defined in claim 1 wherein connecting the removably coupled memory device to the downhole device further comprises coupling a non-volatile memory device to the downhole device.

4. The method as defined in claim 1 wherein connecting the removably coupled memory device to the downhole device further comprises connecting the removably coupled memory device to one of a measuring while drilling and logging while drilling tool.

5. The method as defined in claim 1 wherein connecting the removably coupled memory device to the downhole device further comprises connecting the removably coupled memory device to a processor of the downhole device through a connector in a sidewall of a tool body of the downhole device.

6. The method as defined in claim 5 wherein connecting the removably coupled memory device to the processor further comprises:

coupling the removably coupled memory device within a recess in the tool body side wall; and

placing a cap over the removably coupled memory device and within the recess, and wherein the cap seals against an internal surface of the recess.

7. The method as defined in claim 1 further comprising:

wherein connecting the removably coupled memory device to the downhole device further comprises coupling the removably coupled memory device through a box end of the a tool body of the downhole device; and

wherein, between connecting the removably coupled memory to the downhole device and lowering the downhole device, the method further comprises coupling the tool body within a drill string using the box end.

8. A downhole tool comprising:

a downhole tool body comprising an outer surface;

a processor disposed within the downhole tool body; and

a connector disposed on the outer surface of the tool body, the connector to couple a removably coupled memory device to the processor;

wherein the removably coupled memory device, coupled to the connector, travels with the downhole tool body into and out of the borehole, and wherein the processor stores data to the removably coupled memory device while the memory device and downhole tool body are within the borehole.

9. The downhole tool as defined in claim 8 wherein the removably coupled memory device comprises at least one of a magnetic storage media, an optical storage media, a random access memory and a programmable read only memory.

10. The downhole tool as defined in claim 8 further comprising:

a receiving device proximate to the downhole tool body; and

said receiving device coupled to the processor;

wherein the receiving device receives energy whose properties are indicative of at least one of a formation characteristic and a borehole characteristic, and wherein the data stored to the memory device by the processor is based on the received energy.

11. The downhole tool as defined in claim 10 wherein the receiving device receives acoustic energy.

12. The downhole tool as defined in claim 10 wherein the receiving device receives energy in the form of electromagnetic waves.

13. The downhole tool as defined in claim 10 wherein the receiving device receives energy in the form of gamma radiation.

14. The downhole tool as defined in claim 8 wherein the connector is disposed within a recess in the outer surface, and wherein the downhole tool further comprises a cap that seals against an internal surface of the recess.

15. A method comprising:

coupling a non-volatile memory device to a logging while drilling (LWD) device, the coupling while the LWD device is at the surface;

lowering the LWD device, along with the non-volatile memory device, into a bore hole;

operating the LWD device thereby creating data;

storing the data to the non-volatile memory device;

raising the LWD device and the non-volatile memory device to the surface;

disconnecting the non-volatile memory device from the LWD device;

coupling the non-volatile memory device to a surface computer; and

reading the data from the non-volatile memory device by the surface computer.

16. The method as defined in claim 15 wherein coupling the non-volatile memory device to the LWD device further comprises coupling the non-volatile memory device to a processor of the LWD device through a connector in a side wall of a tool body of the LWD device.

17. The method as defined in claim 16 wherein coupling the non-volatile memory device to the processor further comprises:

coupling the non-volatile memory device within a recess in the tool body side wall; and

placing a cap over the non-volatile memory device and within the recess, and wherein the cap seals against an internal surface of the recess.

18. The method as defined in claim 15 further comprising:

wherein coupling the non-volatile memory device to the LWD device further comprises coupling the non-volatile memory device through a box end of a tool body of the LWD device; and

wherein, between coupling the non-volatile memory to the LWD device and lowering the LWD device, the method further comprises coupling the tool body within a drill string using the box end.

19. A downhole tool comprising:

a tool body having a box end, the box end couples the tool body within a bottomhole assembly;

an electronics insert housing a processor, the electronics insert disposed within the tool body; and

a connector accessible through the box end, wherein the connector is external of the electronics insert, and wherein the connector couples a memory device to the processor within the electronics insert;

wherein the memory device, coupled to the connector, travels with the tool body into a borehole, and wherein the processor stores data to the memory device while the memory device and tool body are within the borehole.

20. The downhole tool as defined in claim 19 further comprising:

a receiving device proximate to the tool body; and

said receiving device coupled to the processor;

wherein the receiving device receives energy whose properties are indicative of at least one of a formation characteristic and a borehole characteristic, and wherein the data stored to the memory device by the processor is based on the received energy.

21. The downhole tool as defined in claim 20 wherein the receiving device receives acoustic energy.

22. The downhole tool as defined in claim 20 wherein the receiving device receives energy in the form of electromagnetic waves.

23. The downhole tool as defined in claim 20 wherein the receiving device receives energy in the form of gamma radiation.